

Rochester DX Association



President's Letter

2019 in the "books"...

Another great year at RDXA, we did **VERY** well in FD, assisted our RVHFG brethren in attaining 3 gavels for unparalleled VHF contesting, assisted in another successful NYQP, provided our membership with fascinating and informative programs and retained (and even grew) our club overall.

Many clubs with a much larger membership can't even come close to what we do every single year.

This, all due to the efforts of each and every member!!

Even though the bands of late have been less than "enjoyable", we still keep very active.

We've gotten thru a fair portion of the contest season but look forward to the ARRL versions of DX contesting. As I've indicated many times, the DX has to contact the USA for points so a distinct advantage to us, especially on the east coast.

February (15-16) is the ARRL DX CW contest, March (7-8) is SSB – plenty of time to be sure everything works "just right".

RTTY will be the order of the day in January, many club members participate with some very impressive results.

As always, submit your logs for RDXA credit and list your scores on the RDXA website score grid.

Looking forward, FD planning meetings will resume soon as we begin to layout our 2020 effort.

In conjunction with that, RDXA will be presenting at an upcoming RARA meeting in the hopes we can solicit the assistance of a few members. A great learning opportunity for anyone not currently involved in FD and a few extra "hands" never hurt.

Where is our "stuff"?

Did you get "stuck" with a bunch of stuff after FD?

Are you storing any RDXA equipment? Trust me, many are....

We'd like to get a handle on where club equipment currently "lives".

Let us know by sending an email to

equipment@rdxa.com

This will allow us to better plan FD resources and allow club members the usage of equipment if the need arises.

Speaking of programs, as the BOD fills the calendar for 2020, we're always interested in any presentation you may want to give at an upcoming general membership meeting.

No matter how inconsequential you may feel your particular activity is, "local" content is far more interesting than something on the internet.

Same holds true for this bulletin, "local content" is key!

Here's to another great year, thanks once again for being active and enthusiastic members of this organization.

Best DX es 73,
Chris, K2CS
President, Rochester DX Association

A Domestic Tranquility Enhancer for the Shack

John AC2RL

After one too many times yelling "Dinner's ready!" down the stairs to the shack, my wife informed me that we needed a better way. Years ago, when it was just my office, we had an old Radio Shack wireless intercom that served well but became worthless when RF started running around.

To Preserve Domestic Tranquility (As it is so aptly phrased in the Preamble of the Constitution), I constructed the following device.

In the kitchen, a big, slate-base knife switch ala Dr. Frankenstein. The Latin label says "Bug the Big Bear".

In the shack, a box that sits front and center above my main monitor. When triggered by the upstairs switch it flashes a bright red LED light and plays a loud "DEELDLE-DEEDLE-DEEDLE" alarm until I press the big black button to acknowledge it. I can hear it even when I'm wearing headphones. Happy wife, happy life.



Icom IC-7300/IC-9700 External Keypad Project.

David Pfonner AC2VE

When contesting but mostly when working Special Event Stations, I use the voice memory buttons. There are eight voice transmit memories. Normally, T1 memory is just programmed with my call sign phonically. The second memory T2 is normally the CQ and is customized for each contest. Memory T3 sends the required exchange, minus the sequence number. I use T4 memory for the 73 endings. This setup changes from time to time. Sometimes I use T2 to give the obligatory "59 New York" response when working a SES.



Shown: T1 has been labeled "AC2VE". T2 has been labeled "Exchange." I was not working any CQ with this setup.

Notice the memory "buttons" cover the bottom half of the screen. I use the bottom half of the screen for two main reasons.

The bottom part of the waterfall provides a long term memory of what happened on a specific frequency. No activity this instant, does not mean there was no activity.

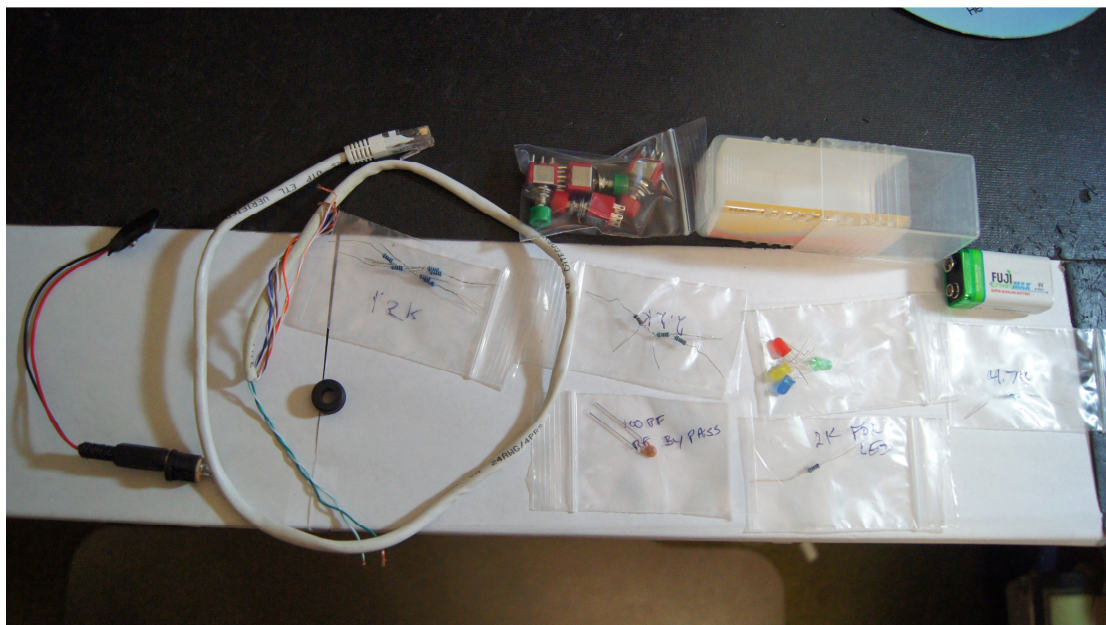
Second, I use the audio scope to show me where to filter out an interfering signal. Icom provides a very useful and fully adjustable notch filter. As shown below:



Plus, on the IC-9700, the memory buttons obscure the secondary frequency information.

Icom allows the use of what they call an "external keypad" that can activate T1 thru T4 remotely. In reality it is just a switch box that selects a specific resistance for each voice memory slot through a set of pins on the microphone connector.

I wanted to build the switch box using just parts I had on hand. I succeeded all except for the switches. I used series/parallel resistor combinations to make the actual values as required.



Not having any perfboard, I just used flying connections.

I decided to add some LEDs. I had a clear box, why not add some color? I used momentary DPDT switches. I could have used the 8 volts from the radio, but decided not to, seeing that I was using

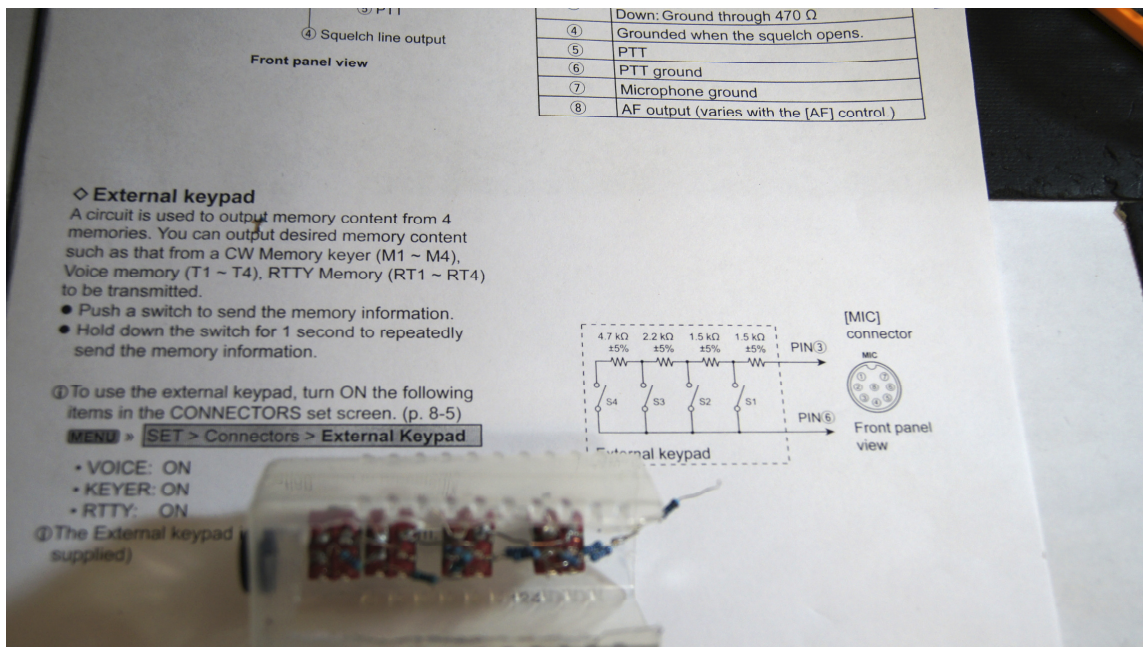
unreliable flying connections that could cause an issue with the radio. I just decided to use a 9 volt battery for LED power.

You will notice that I am using a internet cable for a microphone connector.

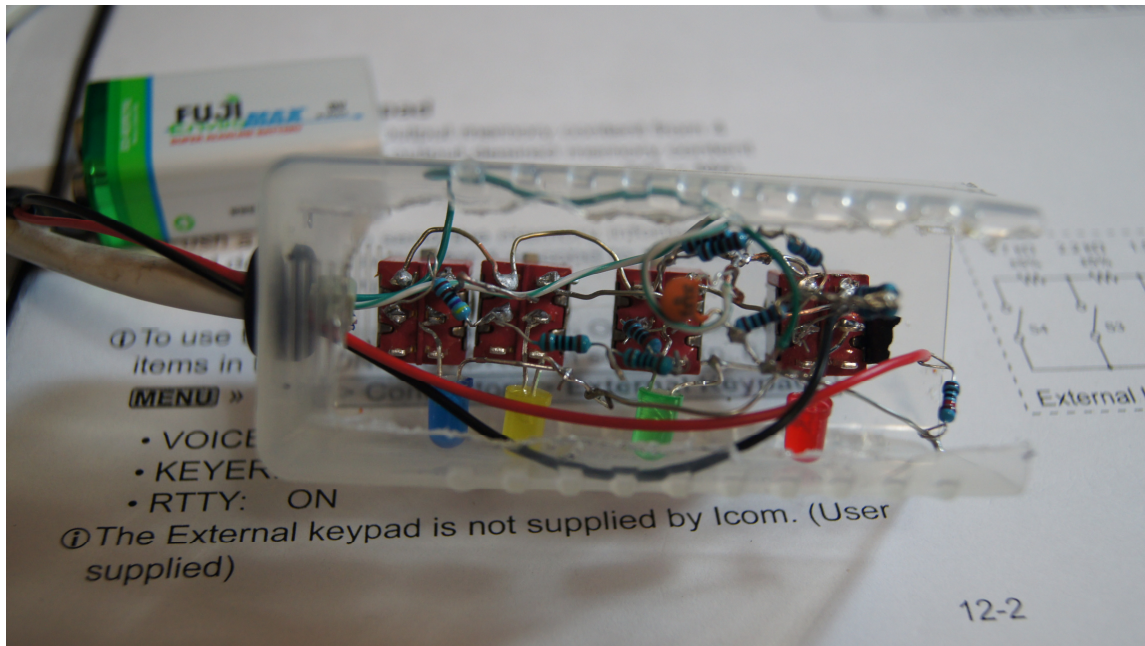
My setup includes both the IC-7300 and IC-9700 with an MFJ microphone radio switch connected to a common boom microphone.



The RJ45, 8 pin jack on the switch box is internally wired in parallel with the 8 pin round "foster" connector. This saved me the all the hassle of trying to wire into the existing round connector. The project became "plug and play."



This is a picture of the partially assembled box (no LEDs) next to the schematic diagram from Icom.



This is what the completed box looks like from the bottom

This box actually works. It only allows the use of 4 out of 8 memories and may not be a permanent solution, however, for now, it works out ok for me.

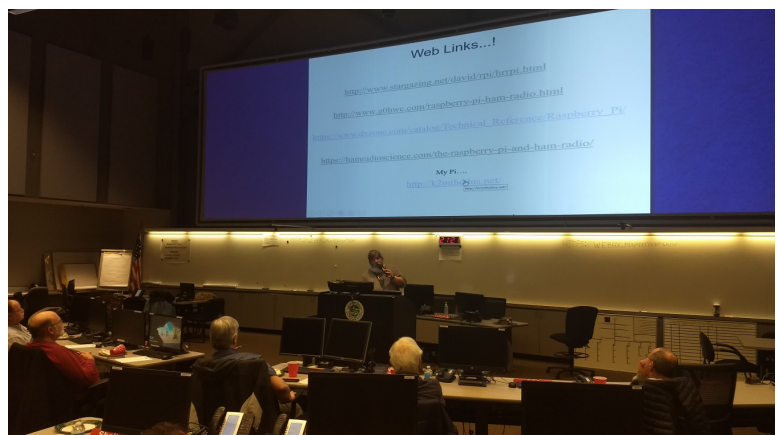


The box in action



October 2019 Meeting
Ken Boasi N2ZN-- Contest University

Photos by David Pfonner AC2VE



November 2019 Meeting
Mark Hazel K2MTH - Raspberry Pi

As seen in QST.... So you think you can run em??

N2BEG

I recently read a member spotlight in the November issue of QST on Dan Craig, N6MJ/ZF2MJ. Dan is an amazing op and contester. The part of the article that blew me away was the description of Dan's record accomplishment in the 2015 CQWW CW contest. For those of you who didn't read this, Dan was operating at ZF1A as a single op. During this contest he logged 10,233 contacts of which 10,014 were confirmed. This was the first time a single op had ever broken the 10,000 QSO mark in CQWW. During this contest, Dan had managed to log 1000 Qs in the first 3 hours, which for you math challenged folks equates to a rate of 333 Qs per hour, eclipsing the previous record rate for this contest by 58 Qs. This breaks down to an astonishing average of 5.56 QSOs *per minute* FOR THREE STRAIGHT HOURS. Dan kept the rate up for the whole contest to average over 208 Qs for the entire 48 hour period.

To accomplish this, Dan practiced a technique called 2BSIQ or Two Band Synchronized Interleaved QSOs. He gave a presentation on this at Dayton in the contest university forum:

https://www.contestuniversity.com/wp-content/uploads/2019/05/3-N6MJ-2BSIQ-and-SO3R_-Riding-the-edge-of-Human-Capabilities.pdf

This involves running 2 pileups on 2 bands simultaneously at high speed and interleaving the contacts so as to maximize rates and squeeze more Qs in while still only transmitting 1 signal at a time. Its NOT SO2R, but even more intense! He implemented this at ZF1A with the above results. He is now working on SO3R. I guess he likes challenges.

So meanwhile while I try to put my pants on without falling over, and struggle to work 2 or 3 contacts a minute in cqww, I will think of these guys like Dan at the superstations making it all look so easy.

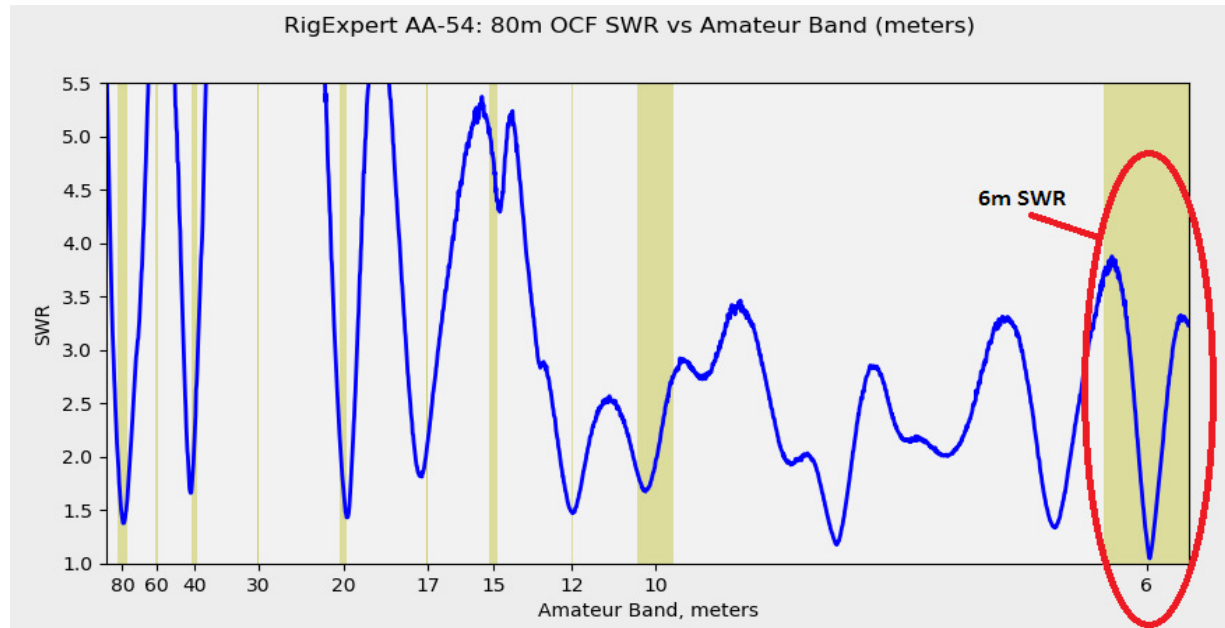
Access to 6m

KM2B

I recently purchased a used ICOM 756-Pro that has transmit and receive capability on 6m. I plan to, eventually, set up a very simple system at my small farm, on a hill, in Canadice, NY.

Following that purchase I encountered a local ham on the air, KA2ENE, who mentioned the existence of a 6m net on Thursday nights. During that conversation I did not think I had an antenna that would access 6m having been focussed on 10m – 80m since my re-entry into Amateur Radio in 2012.

However, out of curiosity, I used my RigExpert AA-54 and scanned my 80m OCF from 2.6 MHz to 54 MHz for, basically, the first time. Then, I wrote a python program to process the exported .csv data to an easy visual way to see the SWR response by Amateur band, shown below.



As can be seen, my 80m OCF has a resonant point in the middle of the 6m band. In fact, of all the usable bands, the OCF (and the surrounding antenna system) has its most resonant, lowest SWR, on 6m.

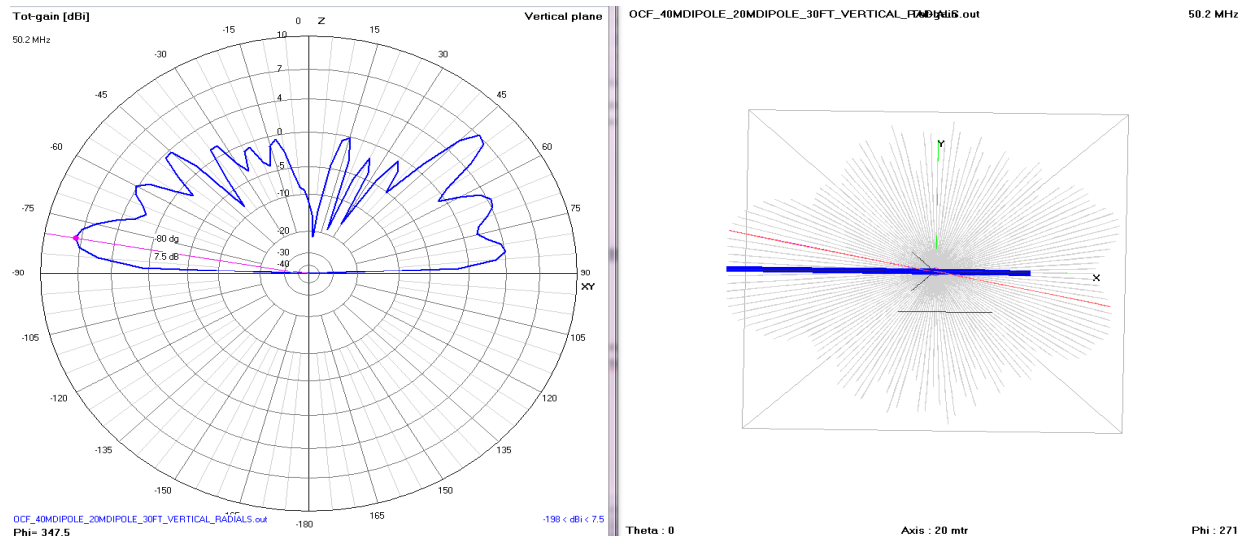
KA2ENE had mentioned the net frequency location as 50.2 MHz which is not where the above resonant point is. However, I tried my old Dentron Monitor tuner, whose manual states 10m-160m, on 50.2MHz and it tuned the 80m OCF down to an SWR of 1.01 using the lowest inductance selection.

So, to my surprise, I DID have an antenna + tuner that allow access to the entire 6m band, albeit a horizontally polarized one.

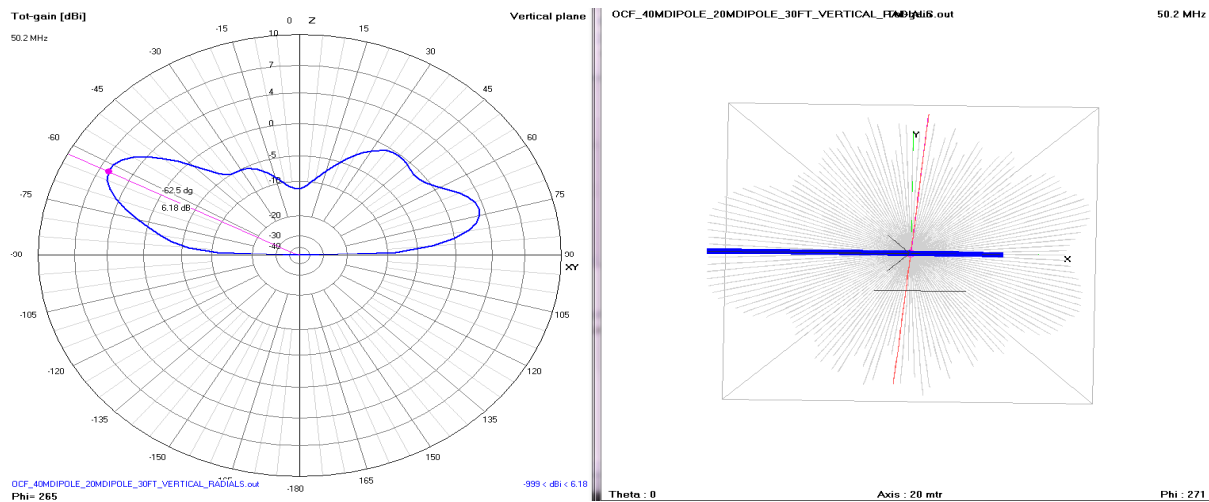
However, I wondered what the far field propagation pattern might be over idealized flat, real ground (my location is not quite flat but close). Would it be so horrible that transmit is possible, but, nobody could receive a 6m signal?

Using my previously built NEC2/4NEC2 file that contains all my antenna system plus the 31 foot gutter that is 20 feet away, I ran that simulation for 50.2 MHz. The resultant pattern is shown below in a several views.

First, along the antenna's off axis, the peak gain from the OCF, on 50.2 MHz is 7.5 dBi at a launch angle of 10° . Not bad really. For me this would be in the direction capturing, roughly San Diego to Alaska with Toronto on the line. About what a dipole would give, but, lower elevation angle of launch.

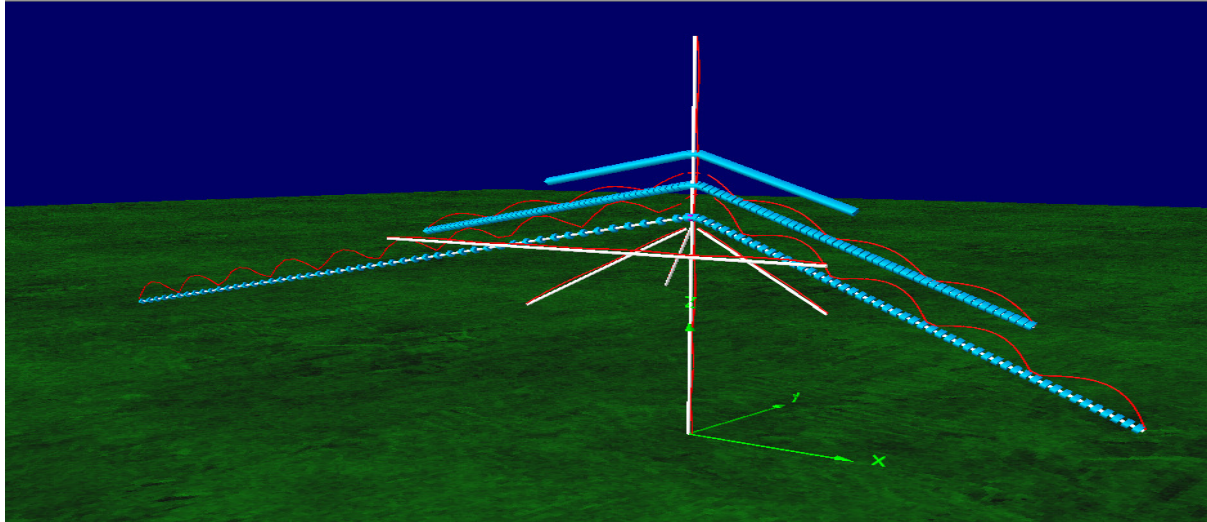


In the direction along the antenna's broadside, shown below, max gain about 6 dBi at around a 7.5 degree launch angle would cover, roughly, South Carolina up through New Brunswick with 4 dBi or so gain. Again, not bad.

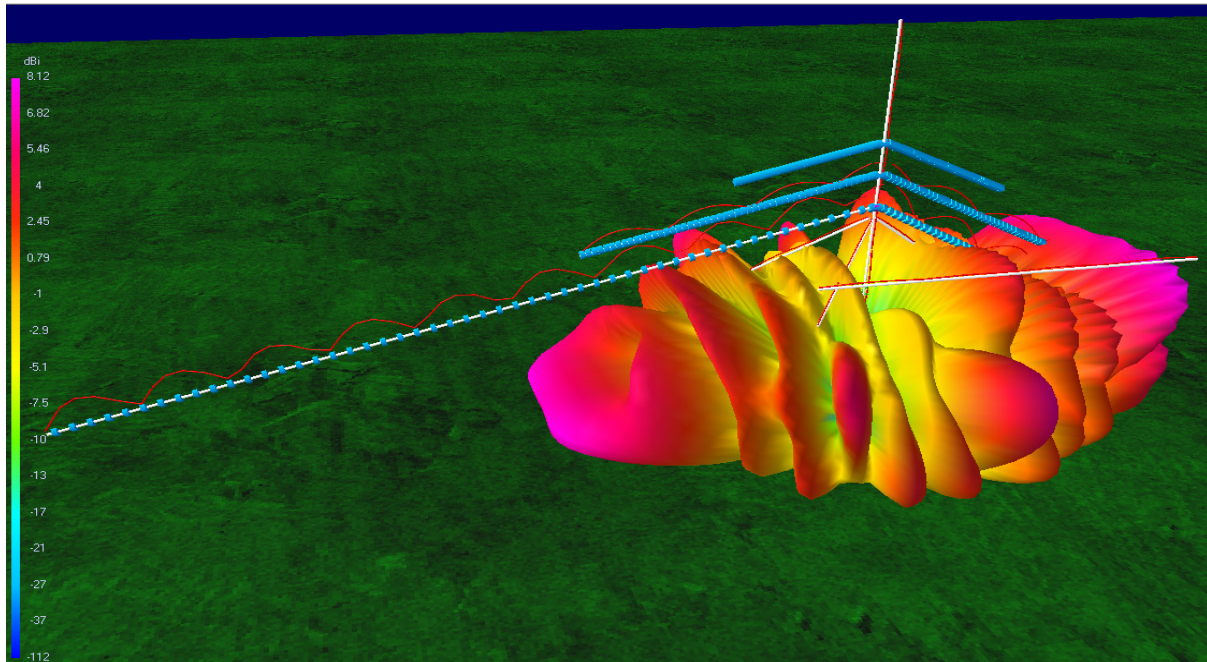


A glance at the two overhead, plan views of the antenna pattern show I have good, positive gain in all directions with the OCF for 6m.

A 3D current view shows the very complex current that develop around the antenna system. Many parts of the overall antenna system are excited by the driven OCF including the 40m dipole and the vertical. These all contribute to both the SWR response and complex current and far field pattern. Below, the 80m OCF (bottom and longest inv V) is the driven part of the system, but, 40m is clearly partly resonant as well.



And, lastly, a 3D view of the overall 3D, very complex, pattern itself. Peak gain is pink at around 8 dBi.



My Slightly OCF Dipole (SOCF)

N2BEG

It seems to me at least that there are two antennas that are all the rage currently. One is the end fed half wave that a lot of people locally have gravitated to using, the other is the OCF, or off center fed dipole. I'm a "as much bang for the buck" kind of guy, and currently my only working HF antennas are my HF9V, my C3S beam and my 160 inverted L. I was interested in something horizontal that would cover as many bands in the 80-10 spectrum as possible with as little effort and expense. I also did not want the ill effects of RF in the shack or having to add counterpoises, etc. that can plague the EFHW antenna.

When I heard Jack, WA2CHV finally got his OCF dipole deployed this past summer, I was motivated after reading of his success. (Never mind Jack is now retired and has all that free time,hi,hi)

When the September issue of QST came out, it had an article on an even better design with more bands which was my incentive to get off my backside and build one.

I stuck with the design in the article by Brian Machesney, K1LI/J75Y which offered 8 bands and a simple balun. I dug out my balun material and found I needed to order some cores. It required two FT140-43 cores for the balun, and a third at the feedline to keep the RF off the feedline. The SOCF dipole employs a specially designed guanella current balun that uses 43 material rather than the traditional 61 mix to increase the choking reactance to about 2000 ohms, or 10x the feedpoint impedance. The article indicates this may reduce efficiency at the higher frequencies, but I figure I have a few years to experiment before that will be a concern.

When the cores arrived, I wound the 4:1 balun with some 18-gauge speaker wire and mounted it in a waterproof Carling junction box from Lowes. I use all stainless hardware when making antennas, I have a fairly good assortment on hand. I hooked up my MFJ to the balun and swept it, all looked as it should.

Table 1 Total line loss vs. frequency for S-OCFD with 50 feet of RG8X					
Operating Frequency (MHz)	Feed-Point SWR	Feed-Point Impedance (Ω)	Mismatch Line Loss (dB)	Loss (dB)	Total Line Loss (dB)
3.6	2.6	$22 + j17$	0.19	0.01	0.20
7.1	5.7	$272 + j63$	0.26	0.52	0.78
10.1	5.6	$29 - j71$	0.31	0.55	0.86
14.15	1.8	$91 + j3$	0.36	0.08	0.44
18.1	3.8	$86 + j86$	0.40	0.30	0.70
21.25	1.1	$54 - j1$	0.44	0.00	0.44
24.9	2.8	$135 + j22$	0.47	0.22	0.69
28.4	1.2	$42 + j3$	0.50	0.00	0.50

Frequencies covered by the SOCF dipole vs. line loss

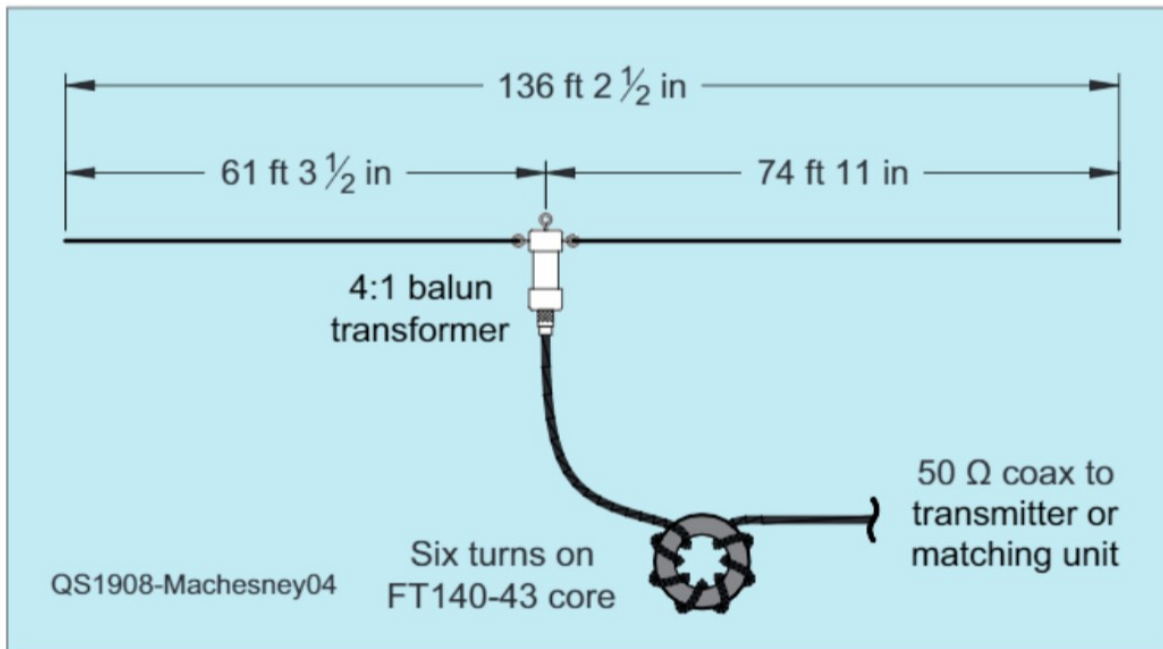


Figure 4 — S-OCFD antenna construction details.



The balun mounted in a carling junction box

I gathered the wire and cut it to the length in the article and preceded to mount the dipole up on my garage at about 20ft to test it. It seems to load up well on all the bands as advertised, however the proximity to the TV antenna does shift the frequencies a bit. I'm going to use it in a contest or two before I decide to improve it and raise it higher. May wind up making a higher power version for when I fix my amp... The next project on the list. I will report on performance when more data is collected. As for the cost: the cores were \$7.50 each, box was \$8 and change. Everything else I had on hand. Winding details and all other info courtesy of September 2019 QST, page 30.



Balun closeup, as mounted



Dipole installed, running SSW to NNE

2019 NYQP Update



As 2019 comes to a close, members of the NYQP team have been hard at work processing 2019 NYQP logs and checking scores. This year, there were 305 logs submitted with a total of 33,931 QSOs. Carey has processed them all and Dean has checked for uniques and the next step is processing for awards. This marks the first time since resurrecting the NYQP that the team has been able to get logs in and processed prior to years end. Great Job Carey and Dean!

Look for the awards and plaques to be out early this year! Still wondering if anyone wants a job doing artwork for the plaques? Email me if you have a desire to show off your artistic talents.

Doug & the NYQP team

ARRL QST ARLB021 -- Ad Hoc Legislative Advocacy Committee to Meet with Lawmakers

Submitted to the newsletter by Ken Hendrickson N8KH

ARRL's Ad Hoc Legislative Advisory Committee will meet with several members of Congress later this month in Washington to introduce new Committee members, reacquaint the lawmakers with Amateur Radio's most-pressing issues, seek their input on the best ways to achieve ARRL's objectives in Congress, and request their continuing support. Committee members have completed a comprehensive analysis of Amateur Radio Parity Act deficiencies for dissemination to Amateur Radio's backers on The Hill. The panel now is following up on this process with the meetings later this month.

The Committee has contracted with The Keelen Group to provide advice and recommendations regarding ARRL's legislative relationships. Keelen Group advisors also will aid in organizing and guiding the meetings between ARRL representatives and key congressional allies in support of Amateur Radio initiatives.

On June 12, the Legislative Advisory Committee held the first of a series of meetings in DC with ARRL Washington Counsel David Siddall, K3ZJ, The Keelen Group, and a small contingent of radio amateurs associated with various governmental and nongovernmental partners to solicit their perspectives and assistance in charting a future course of action. Pacific Division Director and Committee Chair Jim Tiemstra, K6JAT, described these individuals as "critical allies in ARRL's efforts to achieve its legislative objectives."

The process of analyzing and clarifying ARRL's aims began when the Committee was reconstituted with new members at the ARRL Board of Directors' January meeting. The Board had determined a need to "review, reexamine, and reappraise the ARRL's regulatory and legislative policy with regard to private land-use restrictions," with the aim of renewing, continuing, and strengthening ARRL's effort to achieve relief from such restrictions.

"There seems to be no countervailing policy that could justify arbitrary conditions, covenants and restrictions," Tiemstra said. "Indeed, public policy should clearly favor the needs of the Amateur Radio operator."

Amateur Radio's role in public service and emergency communication will be the Committee's strongest argument in seeking relief from private land-use restrictions that limit amateurs' ability to operate effectively.

The Committee will analyze the outcomes of this month's meetings and draft a report with recommendations for the ARRL Executive Committee to review and consider at its October 12 meeting. The full Board is expected to take up the issue at its January 2020 meeting.

RDXA 2019-20 Calendar

September 2019

~~12~~ — BOD — K2TER
~~14-16~~ — ARRL September VHF
~~17~~ — Meeting — Show Shack
28-29 — **CQWW RTTY**

October 2019

~~1~~ — BOD — KM2B
~~15~~ — Meeting — Contest Prep
19-20 — **NYQP**
26-27 — **CQWW SSB**

November 2019

~~5~~ — BOD — N2BEG
2-4 — **ARRL SS CW**
16-18 — **ARRL SS SSB**
~~19~~ — Meeting — Raspberry Pi
23-24 — **CQWW CW**

December 2019

~~3~~ — BOD
6-8 — **ARRL 160m CW**
~~TBD~~ — RMSC Event
14-15 — **ARRL 10m**
~~17~~ — RDXA Holiday Dinner
~~28-29~~ — Stew Perry 160m CW

January 2020

4-5 — **ARRL RTTY Roundup**
~~7~~ — BOD
~~18-20~~ — ARRL January VHF
~~21~~ — Meeting — IC9700
24-26 — **CQWW 160m CW**



February 2020

~~4~~ — BOD
8-9 — **CQWW WPX RTTY**
15-16 — **ARRL DX CW**
~~18~~ — Meeting
28-1 — **CQWW 160m SSB**

March 2020

~~3~~ — BOD
7-8 — **ARRL DX SSB**
~~17~~ — Meeting
28-29 — **CQWW WPX SSB**

April 2020

~~7~~ — BOD
~~21~~ — Meeting
~~TBD~~ — Awards Banquet

May 2020

~~5~~ — BOD
~~15-17~~ — Dayton Hamvention
~~19~~ — Meeting — Combined RVHFG ?
30-31 — **CQWW WPX CW**

June 2020

~~2~~ — BOD
~~TDB~~ — Rochester Hamfest
~~13-15~~ — ARRL June VHF
~~16~~ — Meeting
27-28 — **ARRL Field Day**

July 2020

~~11-12~~ — IARU
~~18-19~~ — CQWW VHF

August 2020

~~18~~ — IRVfest — Dolomite Lodge
~~TBA~~ — ROC City Hamfest
~~31~~ — Contest season concludes
 Membership year concludes

Rochester DX Association

Club Station — W2RDX

Club Website — <http://www.rdxa.com>

Facebook group — RDXA QTH

This Bulletin is the official publication of the Rochester DX Association and is published Quarterly.

All those with an interest in amateur radio, DXing and contesting are cordially invited to any meeting and to join RDXA. Meetings are held at 19:30 Local time on the 3rd Tuesday of each month, September through June. Meetings are located at the Monroe County Emergency Operations Center located at 1190 Scottsville Rd. Rochester, NY 14624.

President,.....Chris Shalvoy – K2CS
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Please send all newsletter submissions, comments, and complaints to the editor:

John Hall AC2RL -- newsletter@rdxa.com



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Paypal: treasurer@rdxa.com

US Mail:

Mike Sanchez KM2B
8 Piccadilly Square
Rochester, NY 14625

Regular Membership: \$25.00

Family, Full time Student
or Out of State member: \$6.25

